

# F1 RAID Class



CAPACITY <sup>†1</sup>	250GB	320GB	500GB	750GB	1TB
MODEL	16MB 32MB	HE252HJ HE322HJ	HE502IJ	HE753LJ	HE103UJ

## FEATURES

- Max. 334GB Formatted Capacity per Disk
- Serial ATA 3.0Gbps Interface Support
- Improved recording stability over temperature with PMR
- Advanced dynamic FOD control for best data integrity
- Intelligent compensation of external disturbance
- SATA Native Command Queuing Feature
- Device Initiated SATA Power Management
- Staggerd Spin-up Support
- Rotational vibration sensor
- Environment friendly product with RoHS compliance
- Improved performance with dual-ARM based firmware
- ATA S.M.A.R.T. Compliant
- ATA Automatic Acoustic Management Feature
- ATA 48-bit Address Feature
- ATA Device Configuration Overlay Feature
- NoiseGuard™
- SilentSeek™

## DRIVE CONFIGURATION

Interface	Serial ATA 3.0Gbps
Buffer DRAM Size	16 / 32 MB
Rotational Speed <sup>†2</sup>	7,200 RPM
Sector Size	512 bytes

## PERFORMANCE SPECIFICATIONS

Read Seek Time (typical)	
Average	8.9 ms
Average Latency	4.17 ms
Data Transfer Rate	
Media to/from Buffer (max.)	175 MB/sec
Buffer to/from Host (max.)	300 MB/sec
Drive Ready Time (typical)	320GB 8 sec 500-1000GB 12 sec

## RELIABILITY SPECIFICATIONS

Non-recoverable Read Error	1 sector in 10 <sup>15</sup> bits
MTBF	1,200,000 POH
Start/Stop Cycles (Ambient)	50,000

## ACOUSTICS (TYPICAL SOUND POWER)<sup>†3</sup>

Active Idle	250/320GB 2.45 Bel 500-1000GB 2.70 Bel
Performance Seek	250/320GB 2.80 Bel 500-1000GB 2.90 Bel

## ENVIRONMENTAL SPECIFICATIONS

Temperature	
Operating	0 ~ 60 °C
Non-operating	-40 ~ 70 °C
Thermal Gradient (max)	20°C/hr
Humidity (non-condensing)	
Operating	5 ~ 90 %
Non-operating	5 ~ 95 %
Linear Shock (1/2 sine pulse)	
Operating, 2ms	70 G
Non-operating, 2ms	250/320GB 350 G 500-1000GB 300 G
Altitude (relative to sea level)	
Operating	-300 to 3,000 m
Non-operating	-300 to 12,000 m

## POWER REQUIREMENTS

Voltage	+5V±5%, +12V±10%		
	250/320GB	500GB	750/1000GB
Spin Up Current (12V)	2.0 A	2.3 A	2.3 A
Seek <sup>†4</sup>	6.70 W	9.22 W	9.7 W
Read/Write(typical)	6.64 W	8.56 W	9.72 W
Idle(typical)	5.32 W	8.0 W	8.72 W
Standby <sup>†5</sup>	0.76/1.13 W	0.79/1.18 W	0.79/1.18 W
Sleep <sup>†5</sup>	0.76/1.13 W	0.79/1.18 W	0.79/1.18 W

## PHYSICAL DIMENSION

Height(max.)	26.1 mm
Width	101.5 mm
Length(max.)	147.0 mm
Weight(avg.)	250/320GB 470 g 500GB 610 g 750/1000GB 640 g

*Specifications are subject to change without notice.*

<sup>†1</sup> 1MB=1,000,000 Bytes, 1GB=1,000,000,000 Bytes

Accessible capacity may vary depending on operating environment and formatting

<sup>†2</sup> 7,200 RPM class. Actual speed can be different a little.

<sup>†3</sup> Averaged value with a high performance cover.

<sup>†4</sup> Random seek with 30% duty cycle.(typical)

<sup>†5</sup> Power consumption values are with/without slumber mode.(typical)

